

# **Analytical Laboratory**

13339 Hagers Ferry Road Huntersville, NC 28078-7929 McGuire Nuclear Complex - MG03A2 Phone: 980-875-5245 Fax: 980-875-4349

# **Order Summary Report**

Order Number:	J13060391			
Project Name:				
Customer Name(s):	josh Quinn, Zack Hall			
	570 D. I. D. D. I			
Customer Address:	573 Duke Power Rd			
	Mail Code: Clliffside Steam Station			
	Mooresboro, NC 28024			
Lab Contact:	Jason C Perkins	Phone:	980-875-5348	
Report Authorized By: (Signature)		Dat	te:	7/2/2013
(Oignature)	Jason C Perkins			

#### **Program Comments:**

Please contact the Program Manager (Jason C Perkins) with any questions regarding this report.

### **Data Flags & Calculations:**

Any analytical tests or individual analytes within a test flagged with a Qualifier indicate a deviation from the method quality system or quality control requirement. The qualifier description is found at the end of the Certificate of Analysis (sample results) under the qualifiers heading. All results are reported on a dry weight basis unless otherwise noted. Subcontracted data included on the Duke Certificate of Analysis is to be used as information only. Certified vendor results can be found in the subcontracted lab final report. Duke Energy Analytical Laboratory subcontracts analyses to other vendor laboratories that have been qualified by Duke Energy to perform these analyses except where noted.

#### Data Package:

This data package includes analytical results that are applicable only to the samples described in this narrative. An estimation of the uncertainty of measurement for the results in the report is available upon request. This report shall not be reproduced, except in full, without the written consent of the Analytical Laboratory. Please contact the Analytical laboratory with any questions. The order of individual sections within this report is as follows:

Job Summary Report, Sample Identification, Technical Validation of Data Package, Analytical Laboratory Certificate of Analysis, Analytical Laboratory QC Reports, Sub-contracted Laboratory Results, Customer Specific Data Sheets, Reports & Documentation, Customer Database Entries, Test Case Narratives, Chain of Custody (COC)

#### Certification:

The Analytical Laboratory holds the following State Certifications: North Carolina (DENR) Certificate #248, South Carolina (DHEC) Laboratory ID # 99005. Contact the Analytical Laboratory for definitive information about the certification status of specific methods.

# Sample ID's & Descriptions:

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Sample ID	Plant/Station	Collection Date and Time	Collected By	Sample Description
2013014682	CLIFFSIDE	21-Jun-13 9:15 AM	GLENN LONG	BOTTOM ASH SLUICE 0.3m
2013014683	CLIFFSIDE	21-Jun-13 8:14 AM	GLENN LONG	FLYASH SLUICE 0.3m
2013014684	CLIFFSIDE	21-Jun-13 10:55 AM	GLENN LONG	SOURCE WATER (INTAKE 0.3m
2013014685	CLIFFSIDE	21-Jun-13 10:50 AM	GLENN LONG	ASH BASIN 0.3m
4 Total Samples				

# **Technical Validation Review**

### Checklist:

<b>✓</b> Yes	☐ No
<b>✓</b> Yes	☐ No
<b>✓</b> Yes	☐ No
	<b>✓</b> Yes

# **Report Sections Included:**

Reviewed By:

DBA Account

✓ Job Summary Report	✓ Sub-contracted Laboratory Results
✓ Sample Identification	$\hfill\Box$ Customer Specific Data Sheets, Reports, & Documentation
✓ Technical Validation of Data Package	Customer Database Entries
✓ Analytical Laboratory Certificate of Analysis	✓ Chain of Custody
☐ Analytical Laboratory QC Report	✓ Electronic Data Deliverable (EDD) Sent Separately

Date:

7/2/2013

### **Certificate of Laboratory Analysis**

This report shall not be reproduced, except in full.

### Order # J13060391

**BOTTOM ASH SLUICE 0.3m** Site: Sample #: 2013014682 Collection Date: 21-Jun-13 9:15 AM Matrix: OTHER Analyte Result Units Qualifiers **RDL** DF Method Analysis Date/Time **Analyst** SULFIDE - (Analysis Performed by Element One) V\_ELE1 Vendor Parameter Complete Vendor Method FLYASH SLUICE 0.3m Site: 2013014683 Sample #: Collection Date: 21-Jun-13 8:14 AM Matrix: **OTHER** Result Qualifiers RDL Method Analysis Date/Time Analyte Units DF Analyst **SULFIDE - (Analysis Performed by Element One)** Vendor Parameter Vendor Method V\_ELE1 Complete Site: SOURCE WATER (INTAKE 0.3m Sample #: 2013014684 Collection Date: 21-Jun-13 10:55 AM Matrix: **OTHER** Qualifiers RDL Analyte Result Units DF Method Analysis Date/Time Analyst SULFIDE - (Analysis Performed by Element One) Vendor Parameter Complete Vendor Method V ELE1 ASH BASIN 0.3m Site: Sample #: 2013014685 Collection Date: 21-Jun-13 10:50 AM Matrix: OTHER RDL Analysis Date/Time Result Units Qualifiers DF Method Analyst Analyte SULFIDE - (Analysis Performed by Element One) Vendor Parameter Complete Vendor Method V\_ELE1



# elementOne

Element One Inc. 6319-D Carolina Beach Rd. Wilmington, NC 28412

Phone: 910 793-0128 Fax: 910 792-6853 e1lab@e1lab.com

### REPORT OF ANALYSES

Duke Energy Laboratory Services 13339 Hagers Ferry Road Bld. MG03A Huntersville, NC 28078 June 28, 2013 Client Project Name CSS Bottom/Fly Ash Sluice Client Project Number J13060391 PO Number

Sample Mat		Sample Type	e Grab				Received Received	06/26/13 1021
Delivered by		Method	SM 4	500 S <sup>2-</sup> D	)		ved by	LLB
eOne ID	Duke Energy ID	Parameter	Result	Unit	Dil	DL	Date Sampled	Time Sampled
20691-1	Bottom Ash Sluice 0.3m	Sulfide	< 0.05	mg/L	1	0.05	06/21/13	0915
20691-2	Fly Ash Sluice 0.3m	Sulfide	< 0.05	mg/L	1	0.05	06/21/13	0814
20691-3	Source Water (intake) 0.3m	Sulfide	< 0.05	mg/L	1	0.05	06/21/13	1055
20691-4	Ash Basin 0.3m	Sulfide	< 0.05	mg/L	1	0.05	06/21/13	1050

Ken Smith, Laboratory Director

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16900			6/19/2013	$\qquad \qquad \Rightarrow \qquad \qquad \\$			danakan	saeni	strioO	 ) # [s3(	oî	**	- em	- Year	<b>Y</b> ***	0	0	0	•	0	0	0	0	•	0	ဝ	*	Total 4		ripidanaan propagaan aan aa		
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Analytical Laborator	304034 macon offer	LOGGE BY W 24/13 13/1	Cooler Temp (C)	Element Une Filtration (0.45 um) 0 Fil	Preservative	Container Volume (mL)	Container Type		Customer to complete all appropriate non-shaded areas.	Collection Inform	Stgnatiure Ö		× 771.80	x / SS01	× > 030												TOTAL	Accepted By:		Accepted By:  Date/Time	3y Da	
		(704) 875-5245 Fax: (704) 875-5038		Fax No: 980-875-4349	Process: FOPR Resp. Center To:	Activity ID:	Stalion. Cliffside		Sample Description or ID	Depth	app. en:	ELIPTOP PROGRAMMENT VERTIFIER MEMBERS AND REPORTED TO THE TOTAL TO THE	E.S.	ntake) 0.3m				AND		A CONTRACTOR OF THE PROPERTY O				AND THE RESERVE OF THE STATE OF		A DESTRUCTION AND THE PROPERTY OF THE PROPERTY		Date/Time	Time	Date/Time,	Superfilme	Learne (9/2/10 100) Total Suffide by: SM 4500-S2-D
	Duke Energy		ct Name CSS Bottonni Fly Ash Sillice	ent Josh Quinn/ Zack Hall	siness Unit: 20036 Pe	803 (D);	shody. CSS Bottomi Fly Ash Stufes		Same	Marian ISE DM V		か名/46名 Bottom Ash Sluice	W. A. A. R. FlyAsh Sluice	M. 20 Mater (intake)	···		ALEXANDARIONALIA (A) (A) MINIMAGANA (A) (A) (A) (A) (A) (A) (A) (A) (A) (A	AND THE PROPERTY OF THE PROPER	AND	Commence and the contract of t	Annie de La Company de La Comp	The state of the s	The control of the co	The state of the s	Sign Company of the C	Control was the same the same transformation of		telinglished By Customer to sign & date below	Remonstrated By	Relinquished By	Seall, ocked By	Commonth Total Sulfide

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### SAMPLE SUBMISSION FORM

Lab ID Page 720691

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1	POIL		VIIV-	

Client:	Duke Energy	
LIMS No	J13060391	
Project ID	CSS Bottom / Fly Ash Sli	uice

Analysis Due Date 07.01.13 QA/QC/Report Due Date 07.01.13

Date Rec:	06.26.13
Time Rec:	1021
Rec By	LLB

Ref. Method: SM4500 S2 D

Sample Identification

1	Bottom Ash Sluice				0.3m
2	Fly Ash Sluice				
3	Source Water (Intak	e)			
4	Ash Basin				
Analya	an Paguagtad	Samples 1-4	Sulfide		
Anaiys	es Requested	NOTE:	Duplicate a	and Spik	ike per method requirements
The MS	S/MSD spike should a to render the final spi	pproximate 2 to 3 tim ke concentration at	nes the samp ~ 500 µg/L	ole conce	centration. If no sulfide detected at 100 μg/L spike the
Lab C	ommunications				
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SS Page 1 of 1 SS by 6/26/2013 12:08:44 PM Prep By / Date AOS 6-77:13
Labeled By / Date ADS 6-27:13
ID Verification By / Date ADS 6-27:13

METHOD:	SM	SM 4500 S2- D				ELEMENT ONE								
ELEMENT ASSAY :	Sulfide				Spectrophotometer Wave Length			OF ANS				.250		
CLIENT:	Duke						SPK L	EVEL (ug	)	66 63 63		5		
Lab ID#	20691				664		MAX A	<u> LIQUOT</u>			2	5.00		
Date:	6-27-13						STAN	DARD cor	nc(ug)			Х		
Time Analysis Begun	14:00											5		
Time Analysis Ended	14:30													
Analyst:	ADJ					STD ABSORPTION				Y				
Х	Υ													
ug STD SOLUTION	STD ABS	1.2							6 990		272			
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12.50	0.998	0.00	2.00	· · · · · · · · · · · · · · · · · · ·	4.00	300 800	10.00	1:	200	14.00	16.00			
15.00	1.272					х								

					Slope	0.083394306	Correlation	0.999010679		
SAMPLE	SAMP	ug PER	mL	F.VOL. X	WEIGHT	RESULTS	% RPD	SPIKE		
I.D.	ABS	ALIQUOT	ALIQUOT	DILUTION	in g.	ug/mL	% SPK REC	LEVEL		
LRB	0	0.00	25	1	1	<				
LRB SPK 1	0.398	4.93	25	1	1 .	0.197	99%	5.0		
LRB SPK 2	1.04	12.5	25	1	1	0.502	100%	12.5		
QC	0.391	4.84	25	1	11	0.194	97%	5.0		
20691-1	0.003	0.24	25	1	1	<				
20691-1 dup	0.003	0.24	25	1	1	<	N/A			
20691-2	0.013	0.35	25	1	1	<				
20691-2 spk	0.394	4.88	25	1	1	0.195	98%	5.0		
20691-2 spk	1.110	13.37	25	1	1	0.535	107%	12.5		
20691-3	0.006	0.28	25	1	1	<				
20691-4	0.003	0.24	25	1	1	<				
BLK	0	0.000	25	1	1	<				
QC	0.391	4.843	25	1	1	0.194	97%	5.0		
As	per client	s request: no	sulfide is pre	sent in sample	e a 500ppm/12.5ug	g spike concentrati	on was rendered.			
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		Duke Energy Anal	ytical Laboratory					alytica	al Lab	orator	Use Only				Man 15			_				
Duke Energy Analytical Laboratory  Sample Log  Mail Code MGO3A2 13339 Hager Huntersville, I		A2 (Building 7405) ers Ferry Rd N. C. 28078	Order #J	30403	3411	Matrix other 8,Time 124/13 1311				Samples Origin	NC_ SC_ PROGRAI			Page _1 of1_ DISTRIBUTION ORIGINAL to LAB, COPY to CLIENTage 9 of 9								
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		FORR	980-875-4349 Resp. Center To:	PO#	L45772	10.6					r merec		NaOH				Omn	ereu				
ess Unit:	20035	Process: FOPR	CS00					rvative				Zn acetate										
			Mail Code: MG03A3			Container Volum							500						1000			
dy: CSS Bottor	m/ Fly Ash Sluice	Station: Cl	liffside				Contain	er Ty	ре				HDPE									8
Sample Description or ID			n or ID	Customer to complete all a non-shaded areas			Il appropriate eas.						9									Containers
			Depth		Collection	Information		Comp.	ap				Sulfide									Total #
USE ONLY Lab ID	Location			Date	Time		gnature	8	Grab													
3014682	Bottom Ash S	luice	0.3m	6/21/1		20	00		X				1									1
30141083	FlyAsh Sluice		0.3m		0814				X				1								25	1
3014684	Source Water	(intake)	0.3m		1055		/		X				1	ASSAURT								1
3014685	Ash Basin		0.3m	1	1050		<u> </u>		X			1884	1									1
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